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UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN FRANCISCO DIVISION

SYNOPSISYS, INC., a Delaware Corporation,

Plaintiff,

v.

MAGMA DESIGN AUTOMATION, INC., a Delaware Corporation,

Defendant and Counterclaimant.

AND RELATED COUNTERCLAIMS.

Case No. C04-03923 MMC

**MAGMA DESIGN AUTOMATION, INC.'S
POST-TRIAL REPLY BRIEF**

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INTRODUCTION

At the outset of trial, the Court posed three questions: (1) what are the claimed inventions; (2) who contributed what to the inventions; and (3) what was the significance of the contributions. To answer those questions, Magma presented compelling evidence that:

- (1) The inventions claimed by the '446 and '438 Patents require operative methods for automatically setting and measuring target delays for arbitrary cells in integrated circuits;
- (2) Kudva discovered that the theory of logical effort provided operative methods based on the concept of gain for measuring and setting target delays for arbitrary cells in integrated circuits; and
- (3) Kudva's discovery resulted in the conception of the methods claimed in the '446 and '438 Patents.

Magma also demonstrated that a joint team of IBM and Synopsys engineers reduced to practice the inventions claimed in the '446, '438, and '114 Patents (the "Patents") by implementing and testing those inventions in Synzilla.

The evidence of IBM's contributions provides a complete, consistent, and convincing record of joint conception and reduction to practice. This evidence includes documents and testimony from van Ginneken, Kudva, and other engineers and executives who worked on the joint project, as well as testimony from both Synopsys's and Magma's EDA experts. (*See generally* Magma's Post-Trial Brief (Docket No. 1133) ("Magma Br.") 12:22-20:17, 26:3-22, 28:5-34:8.)

Since the inception of this litigation, however, Synopsys has sought to avoid an adjudication on the merits of the ownership of the inventions claimed in the Patents. Synopsys's Post-Trial Brief does not depart from this pattern. Each of Synopsys's arguments is without merit.

First, Synopsys argues that the JDA's joint ownership provisions are "wholly inapplicable." (Synopsys's Post-Trial Brief (Docket No. 1131) ("Synopsys Br.") 12:6-8.) But the plain language of the JDA and the Dissolution Agreement as well as the parties' conduct during the relevant time period demonstrate that Joint Inventions are jointly owned under the JDA regardless of whether they were reduced to practice by incorporation into NGSS or Joint

1 Products. The Dissolution Agreement did not terminate IBM's ownership rights to Joint
2 Inventions because it expressly incorporated the JDA's joint ownership provision.

3 **Second**, Synopsys's contention that Kudva contributed merely an embodiment of a
4 preexisting invention is contrary to the evidence produced at trial. Before the collaboration with
5 Kudva, van Ginneken had nothing more than the "philosophy" of Grodstein. Kudva contributed
6 the operative methods for setting and measuring the target delays for arbitrary cells in an
7 integrated circuit as claimed by the Patents.

8 **Third**, Synopsys's argument that the inventions were not reduced to practice in Synzilla
9 applies an incorrect test for reduction to practice. The evidence proves that Synzilla practiced the
10 claims of the Patents and that the inventions worked for their intended purposes. Nothing else is
11 required to demonstrate reduction to practice. *Slip Track Sys., Inc. v. Metal-Lite, Inc.*, 304 F.3d
12 1256, 1265 (Fed. Cir. 2002).

13 **Fourth**, Synopsys may not rely on equitable principles to preclude Magma from asserting
14 IBM's ownership interest and Magma's license with IBM as a defense to infringement. Equity
15 must "avoid doing inequity." *In re An-Tze Cheng*, 308 B.R. 448, 460 (B.A.P. 9th Cir. 2004).
16 Estopping Magma from raising IBM's ownership would create severe inequity because it would
17 grant Synopsys dominion over patents that it knows that IBM co-owns. Not only would IBM and
18 Magma lose their respective rights as a co-owner and licensee, Synopsys would realize an
19 extraordinary windfall. Under Synopsys's constructions, the Patents grant it exclusive ownership
20 over the idea of setting a target delay for a cell, regardless of the method used to set the delay and
21 regardless of whether the target delay is later revised and reset. (Tr. 89:10-90:2.) Synopsys
22 knows that such an elementary idea could never be patentable because it is nothing more than the
23 premise of the constant delay philosophy described by Grodstein. Yet if Magma is estopped from
24 asserting IBM's ownership, Synopsys will further insist that the doctrine of assignor estoppel
25 precludes Magma from attacking the validity of the Patents. The result: Synopsys will argue that
26 its chief competitor cannot perform a basic technique of logic synthesis and thus cannot develop
27 and market synthesis software. Thus, equity demands a full and fair consideration of the issues
28 on their merits.

ARGUMENT

I. THE JDA'S JOINT OWNERSHIP PROVISIONS APPLY TO THE INVENTIONS CLAIMED IN THE PATENTS.

Synopsys offers an argument calculated to render the joint ownership provisions of the JDA “wholly inapplicable” to IBM’s work on Synzilla. In order to prevail, Synopsys must show that: (1) under the JDA, Joint Inventions must be incorporated into NGSS to be jointly owned; (2) the Inventions developed for Synzilla were not jointly owned because Synzilla was not NGSS; *and* (3) the Dissolution Agreement “entirely terminated” IBM’s patent rights arising under the JDA. (Synopsys’s Br. 11:1-14:20; 33:2-35:7.) The plain language of the agreements and the parties’ conduct refute each of these propositions.

A. Under Section 4.1.2.1, Joint Inventions Are Jointly Owned Regardless Of Whether They Are Incorporated Into NGSS.

Synopsys’s assertion that a Joint Invention requires that the Invention be reduced to practice through incorporation into an actual product contradicts the JDA’s disjunctive definition of a “Joint Invention” as arising from a joint conception or joint reduction to practice. (Synopsys Br. 11:4-21.) The JDA provides that a “Joint Invention” can arise in one of two ways: joint conception *or* joint first reduction to practice. (Ex. 1120 §§ 1.24, 1.25, 4.1.2.1.) *Any* “Invention” that the parties jointly conceived in furtherance of the JDA constitutes a “Joint Invention,” regardless of whether that invention was ever reduced to practice through its incorporation into NGSS. (Ex. 1120 § 1.25; *see also* Magma Br. at Section I.A.) As long as the Invention is jointly conceived *or* jointly reduced to practice in furtherance of the JDA’s product development activities, it is jointly owned even if it is never incorporated into a product meeting the definitions of NGSS or Joint Product. (Magma Br. at Section I.A.)

B. Even Under Synopsys’s Construction, Joint Inventions Incorporated Into Synzilla Are Jointly Owned Because Synzilla Was NGSS.

Even if Synopsys were correct – and it is not – that a Joint Invention must be incorporated into NGSS or a Joint Product to be jointly owned, Synopsys also must show that Synzilla was not NGSS. (Synopsys Br. 13:24-14:20.) Synopsys cannot make this showing. Synzilla satisfied the

JDA's definition of NGSS because Synzilla (1) "performed logic synthesis" and (2) was based on BooleDozer and Design Compiler. (Ex. 1120 § 1.31; FF ¶¶ 176, 177, 179; Ex. 1659-1.) Thus, even under Synopsys's construction of the JDA, Joint Inventions incorporated into Synzilla are jointly owned because Synzilla constituted NGSS.

Synopsys's claim that NGSS is limited to a "pure synthesis" tool that could *not* perform placement and routing is inconsistent with the JDA and the parties' conduct. (Synopsys Br. 13:2-7.) The JDA defines NGSS as "an EDA synthesis software product . . . that is based on Design Compiler or Enhanced Design Compiler" (Ex. 1120 § 1.31.) This definition does not state or imply that NGSS must perform *only* synthesis. (*Id.*) Such a limitation would be improper because it would contradict the requirement that NGSS be "based on Design Compiler," as Synzilla was. (*Id.*; see FF ¶¶ 176, 177, 179; Ex. 1659-1.) Design Compiler was not a pure synthesis tool because it took information from placement which it used when performing logic synthesis, just as Synzilla did. (Tr. 1035:18-1036:11 (Camposano).) Moreover, the objectives set forth in the JDA – to create tools capable of designing complex integrated circuits – show that the parties sought to develop a product that would perform logic synthesis *and* physical design. (Ex. 1120 § 2.2; see also *id.* at Exhibit A-4.)

Consistent with the JDA's objectives, the parties always treated Synzilla as NGSS. Synopsys admits that Synzilla was "the logic and physical synthesis Next Generation system developed as part of the Joint Development Agreement between IBM and Synopsys." (Tr. 823:2-14 (Damiano).) A July 1997 presentation regarding the joint alliance states, "NGSS/Synzilla development well on track." (Ex. 1428 at IBM002081.) Synopsys expressly acknowledged that Joint Inventions arising out of the parties' development of Synzilla would be jointly owned by IBM: "[t]he problem with filing a patent with Synzilla is that IBM gets equal access rights to it and they could potentially sell it off to anyone." (Ex. 1262; see also Magma Br. at Section I.C; FF ¶¶ 161, 173-179.). The joint ownership of the Wavefront Inventions and the '205 Patent demonstrates that IBM and Synopsys considered Joint Inventions developed for Synzilla as jointly owned under the JDA. (FF ¶¶ 206-213; Magma Br. at Section I.B; Ex. 1524 at SNP005694.)

Synopsys's reliance on IBM's '557 Patent is misplaced because there is no evidence (and no party has ever claimed) that any of the inventions in the '557 Patent were Joint Inventions under the JDA. Synopsys's witnesses testified that the '557 Patent is *unlike* the gain-based synthesis inventions described in Professor Otten's 1996 ICCAD presentation or in the '446 Patent. (Tr. 802:20-803:9 (Damiano).) Furthermore, Magma has never asserted that "any patent that IBM filed on *any technology relating to Synzilla* would be jointly owned by Synopsys." (See Synopsys Br. 11:22-24 (emphasis added).) Based on the plain language of the JDA, Magma contends only that *Joint Inventions* arising out of the parties' performance of the JDA are jointly owned. Inventions separately conceived and reduced to practice are not jointly owned, even if they were used in connection with the JDA projects. (Magma Br. 4:28-5:6.)

C. The Dissolution Agreement Did Not Terminate IBM's Ownership Of Joint Inventions.

By expressly incorporating Section 4.1.2.1 into the Dissolution Agreement, the parties confirmed that they intended to maintain joint ownership of Joint Inventions that arose as part of their product development activities. Synopsys's assertion that IBM's ownership rights in Joint Inventions were "entirely terminated" by the Dissolution Agreement therefore fails. (Synopsys Br. at 33:4-5.) If, as Synopsys contends, the parties had intended to abrogate IBM's ownership rights by transforming Joint Inventions into NGSS Information, there would have been no reason to incorporate Section 4.1.2.1 into the Dissolution Agreement. (Ex. 1120 at IBM000098; see *Browning-Ferris Indus. of New York, Inc. v. County of Monroe*, 103 A.D.2d 1040, 1041 (N.Y. App. Div. 1984), *aff'd*, 64 N.Y.2d 1046 (N.Y. 1985) (contracts should be interpreted to give meaning and effect to every provision).)

Furthermore, Synopsys's argument that the Dissolution Agreement terminated IBM's intellectual property rights relating to NGSS or Synzilla is inconsistent with other provisions in the Dissolution Agreement. The Dissolution Agreement expressly preserves IBM's rights to certain separately owned intellectual property by incorporating Section 4.4 of the JDA, under which IBM granted Synopsys a license to its separately owned intellectual property contained "*in NGSS Information as set forth in Section 4.1.1.*" (Ex. 1120 § 4.4 (emphasis added); see *id.* at

1 IBM000098 (incorporating Section 4 and neither excluding nor modifying Section 4.4.)¹

2 **II. KUDVA JOINTLY CONCEIVED OF THE INVENTIONS CLAIMED IN THE ‘446**
 3 **AND ‘438 PATENTS.**

4 Synopsys seeks to obscure the overwhelming evidence of Kudva’s joint inventorship by
 5 manufacturing a series of arguments concerning the standard of inventorship, the scope of the
 6 ‘446 and ‘438 Patents’ claims, and the significance of Kudva’s contributions. Each argument is
 7 without merit.

8 **A. Contract, Not Federal Patent Law, Governs The Burden Of Proof And**
 9 **Definition Of Conception Of An Invention Under The JDA.**

10 Synopsys asserts that Magma must prove Kudva’s inventive contributions by clear and
 11 convincing evidence regardless of whether IBM’s ownership is assessed under the JDA or federal
 12 patent law. Synopsys also asserts that the JDA incorporated the federal patent law definition of
 13 an invention. (Synopsys Br. 16:6-18:2.) These arguments are contrary to established law.

14 As to the burden of proof, Synopsys incorrectly relies on *Hess v. Advanced*
 15 *Cardiovascular Systems, Inc.*, 106 F.3d 976 (Fed. Cir. 1997), for the assertion that “the clear and
 16 convincing standard applies no matter the particular circumstances of the case.” (Synopsys Br.
 17 16:19-23.) *Hess* involved a dispute concerning the inventorship of a patent under federal patent
 18 law, not ownership and inventorship rights governed by a contract. *Hess* does not address cases,

19
 20 ¹ Synopsys relegates to a footnote its twice previously rejected claim that Magma is precluded
 21 from raising IBM’s ownership as a defense to patent infringement because Magma is not a direct
 22 or implied third-party beneficiary under the JDA. (Synopsys Br. 9 n.2; *but see* Am. Order
 23 Denying Mots. for Summ. J. Re: Patent Ownership, dated Mar. 30, 2006 (Docket No. 994) (“SJ
 24 Order”) at 6:5-7 (finding that Magma “would not be prevented from arguing that IBM and
 25 Synopsys are co-owners of the disputed patents”) and Tr. 31:25-32:20 (“if standing were an issue,
 26 that should have been raised a long time ago because nobody would be here [at the ownership
 27 trial], period”).) Synopsys’s argument also fails on the merits because Magma is a third-party
 28 beneficiary under the JDA by virtue of IBM’s licensing of the Patents to Magma. Magma’s
 license is a defense to Synopsys’s claims of infringement and, as a result, it may raise IBM’s
 ownership rights under the JDA. *See E.G.L. Gem Lab Ltd. v. Gem Quality Inst., Inc.*, No. 97 Civ.
 7102 (LAK), 1998 WL 314767, at *3 n.38 (S.D.N.Y. June 15, 1998) (noting that licensee would
 be permitted to invoke arbitration clause in trademark agreement as third-party beneficiary even
 though not signatory to agreement); *Crossland Sav. FSB v. Rockwood Ins. Co.*, 700 F. Supp.
 1274, 1283 (S.D.N.Y. 1988) (“It is black letter law that a third-party beneficiary need not be
 ‘identified or even identifiable at the time of the making of a contract.’”) (citing *Associated*
Teachers of Huntington, Inc. v. Bd. of Educ., 33 N.Y.2d 229, 234 (N.Y. 1973)).

1 like this one, where the parties' patent ownership rights are governed by a joint development
 2 contract. Nor has Synopsys cited to any authority imposing the clear and convincing standard to
 3 patent inventorship or ownership governed by contract.²

4 "[T]he question of who owns the patent rights and on what terms typically is a question
 5 exclusively for state courts." *Jim Arnold Corp. v. Hydrotech Sys., Inc.*, 109 F.3d 1567, 1572
 6 (Fed. Cir. 1997). Where a contract allocates patent ownership, courts are to decide the issue
 7 based on the law of the jurisdiction selected by the parties. *Int'l Nutrition Co. v. Horphag*
 8 *Research Ltd.*, No. 3:96CV386 (DJS), 2000 WL 1863560, at *3 (D. Conn. Apr. 14, 2000), *aff'd*,
 9 257 F.3d 1324 (Fed. Cir. 2001).

10 The JDA is controlled by New York law. (Ex. 1120 § 12.2.) New York law requires
 11 contract claims to be proven by a preponderance of the evidence. *Angelo, Gordon & Co., L.P. v.*
 12 *Dycom Indus.*, 04 Civ. 1570 (RMB), 2006 U.S. Dist. LEXIS 15784, at *18 (S.D.N.Y. Mar. 31,
 13 2006). The JDA defines how Joint Inventions arise (Ex. 1120 § 1.25) and governs the ownership
 14 of patents that issue on Joint Inventions. (*Id.* § 4.1.2.1.) Magma need only prove that IBM
 15 jointly owns the Patents under the JDA by a preponderance of the evidence.

16 Synopsys's assertion that the JDA incorporates the technical patent law test for conception
 17 of an invention ignores the JDA's express definition of "Invention" and violates controlling law.
 18 (Synopsys Br. 17:5-18:2.) The JDA provides that "'Invention' means **any discovery or**
 19 **improvement**, conceived or first reduced to practice during the term of this Agreement in the
 20 performance of this Agreement, solely or jointly by one or more employees of Synopsys, or
 21 solely or jointly by one or more employees of IBM." (Ex. 1120 § 1.24 (emphasis added).) The
 22 use of the term "any" means that Inventions include discoveries or improvements that are not
 23 independently patentable. The parties could have defined "Invention" to be limited to "any
 24 invention patentable under federal patent law." They did not do so. Indeed, Synopsys decided
 25

26 ² *Univ. of Colorado Found., Inc. v. American Cyanamid Co.*, 196 F.3d 1366, 1372 (Fed. Cir.
 27 1999), to which Synopsys also cites, is inapposite because it addressed the substantive standard of
 28 inventorship, not the quantum of proof that a party must satisfy to prove inventorship. That case
 also did not involve a contract governing inventorship or ownership.

1 not to file the draft patent applications in 1996 precisely because of its concern that IBM would
 2 be a co-owner of any constant delay patents under the JDA regardless of whether Kudva were a
 3 co-inventor under federal patent law. (FF ¶¶ 158-161.)

4 In contracts governing intellectual property ownership, parties are free to define terms
 5 such as “conceive” and “invention” in a manner different from their technical patent law
 6 meanings. (Magma Br. 23:24-24:9 (citing *Am. Tel. & Tel. Co. v. Integrated Network Corp.*, 972
 7 F.2d 1321, 1324 (Fed. Cir. 1992).) Synopsys’s authorities do not support the contrary view that
 8 the JDA incorporated the technical patent law meaning of conception of an invention. None of
 9 Synopsys’s cases involved a contract, such as the JDA, that defined the term “Invention”
 10 differently from the definition used in federal patent law. For example, *Uribe v. Merchants Bank*
 11 *of New York*, 693 N.E.2d 740, 743 (N.Y. 1998), which did not involve patent rights, stands for the
 12 proposition that contract terms should be interpreted in light of the relevant context. (Synopsys
 13 Br. 17:6-8.) And, *Nau v. Vulcan Rail & Construction Co.*, 36 N.E.2d 106, 111 (N.Y. 1941),
 14 merely stated that “[t]echnical words in a contract must be taken in a technical sense unless the
 15 context of the instrument or a usage which is applicable clearly indicates a different meaning.”
 16 (Synopsys Br. 17:9-14.)

17 Synopsys’s reliance on *Sunbeam Products, Inc. v. Wing Shing Products (BVI) Ltd.*, 311
 18 B.R. 378 (S.D.N.Y. 2004) is similarly misplaced. (Synopsys’s Revised Findings of Fact and
 19 Conclusions of Law (“Synopsys FFCL”) ¶ 129.) *Sunbeam* held that a party could possess patent
 20 rights as a result of being a “joint developer” under a contract even if the party’s contributions did
 21 not rise to the level of joint inventorship under federal patent law: “[w]hether a party has patent
 22 rights as a co-inventor is a distinct issue from whether a party who is not a co-inventor has
 23 acquired a right to share patent rights through an agreement with the inventor.” *Sunbeam*
 24 *Products, Inc.*, 311 B.R. at 392. Thus here, as in *Sunbeam*, even if the Court were to find that
 25 Kudva’s contributions were not sufficient to make him a joint inventor under federal patent law,
 26 his contributions to “Joint Inventions” as defined in the JDA still could make IBM a co-owner of
 27 the Patents. This is exactly why Synopsys did not file the draft patent applications it had prepared
 28 in 1996. (FF ¶¶ 158-161.)

B. Kudva's Contributions Are Sufficient To Make IBM A Co-Owner Of The '446 And '438 Patents.

Synopsys's assertion that Kudva did not contribute to the conception of the construed claims of the '446 and '438 Patents, but "at best" contributed to one embodiment of one of those claims (claim 49) is incorrect. (*See* Synopsys Br. 18:3-23:20.) Synopsys's position violates the Court's claim construction and ignores the evidence of Kudva's contributions.

1. Synopsys's Conception Arguments Violate The Court's Claim Construction.

Synopsys's reading of the claimed inventions is so broad that van Ginneken could not have invented them because they were embodied by Grodstein. (Synopsys Br. 20:16-21.); *see Beech Aircraft Corp. v. EDO Corp.*, 990 F.2d 1237, 1248 (Fed. Cir. 1993) ("At the heart of any ownership analysis lies the question of who first invented the subject matter at issue . . ."). Under the '446 and '438 Patents, the target delay is met by resizing the cell, a technique that Synopsys admits is as old as the field of logic synthesis itself. (Tr. 861:23-862:1 (Damiano).) According to Synopsys, the target delay can be set based on any value, including the prior art method of estimating wire lengths. (Tr. 95:15-18, 97:16-101:8, 108:14-17.) Thus, under Synopsys's broad reading of the claims, the basic invention in the '446 and '438 Patents is setting a target delay (which can be changed at any time) and resizing the cell to meet the delay. (Tr. 89:10-90:2.) This is nothing more than the portion of Grodstein's work that included setting a target delay and resizing the cell to meet the target delay.³

It was Kudva who contributed something other than methods previously disclosed by Grodstein. Kudva connected the theory of logical effort to logic synthesis, resulting in novel

³ Synopsys's assertion that Magma is precluded from arguing that Kudva's contributions were inventive because Magma has separately argued in proposed requests for reexamination that the inventions are obvious over the prior art is incorrect. (Synopsys Br. 23:9-12.) At this stage of the litigation, the Patents maintain their presumption of validity. 35 U.S.C. § 282. Assuming that the claims are valid, Kudva contributed to their conception and Synopsys is not entitled to assert them against Magma. If, however, the litigation proceeds to a stage in which validity is at issue, then Magma intends to demonstrate invalidity (if not precluded by assignor estoppel) based on a number of prior art references. Alternative theories are perfectly proper "regardless of consistency." Fed. R. Civ. P. 8(e)(2).

1 methods that led to the claimed inventions. Van Ginneken emphasized the significance of this
 2 contribution in the Driving on the Left Hand Side of the Performance Speed-way paper: “The
 3 concept of logical effort is used to motivate the constant delay model for logic synthesis, and to
 4 determine appropriate constant delays for library cells.” (Ex. 1195 at SY012221.) All of the
 5 claims of the ‘446 and ‘438 Patents require either an “initial intended delay” or a “relative delay
 6 value.” The Court construed both terms to mean “a delay set as a target.” (Docket No. 392 at
 7 32:8, 32:13.) According to the Court’s construction, the target delay is held constant unless it is
 8 revised at some point in the design process. (*Id.* at 10:1-10.) Conception of the “complete and
 9 operative invention, as it [was] hereafter to be applied in practice,” *Ethicon, Inc. v. U.S. Surgical*
 10 *Corp.*, 135 F.3d 1456, 1460 (Fed. Cir. 1998), requires a method (1) to set the target delay, and (2)
 11 thereafter to calculate changes to the delay caused by changes in the load occurring during the
 12 design process; these load changes also must be accommodated by adjustments in cell size to
 13 maintain the target delay. These methods must be “operative,” *i.e.*, they must be independent of
 14 cell size (which will vary), and they must work in an automated system for designing integrated
 15 circuits using arbitrary cells, as further required by all the claims. (Magma Br. 12:22-13:18.)

16 Kudva’s contribution “helped make the invention patentable” (Synopsis Br. 18:13-15)
 17 because this contribution supplied the operative methods required by the claims. (Magma Br.
 18 12:22-17:3.) Dr. Sarrafzadeh explained in detail why the theory of logical effort as applied to
 19 constant delay supplied the required operative methods, and why the methods of Grodstein,
 20 Mead, and Glasser did not. (Tr. 1175:13-1177:22, 1179:21-1183:10, 1202:8-1203:18
 21 (Sarrafzadeh); *see also* Magma Br. at Section II.); *see Ethicon*, 135 F.3d at 1460 (assessing
 22 inventorship by comparing inventive contributions to claims).

23 Synopsis argues that claim 49 merely requires “the use of an initial gain value to
 24 determine an initial intended delay.” (Synopsis Br. 18:26-27.)⁴ Synopsis ignores several

25
 26 ⁴ Synopsis focuses solely on the conception of claim 49 and makes no attempt to rebut
 27 Magma’s showing that Kudva contributed to the conception of all the claims in the ‘446 and ‘438
 28 Patents. (Synopsis Br. 21:13-23:20.) Magma’s Post-Trial Brief demonstrated why Kudva’s
 contributions were critical to the conception of all those claims. (Magma Br. 12:22-13:18, 14:24-
 17:3.)

1 requirements of the claim, including that (1) there be an “*automated method* for modeling the
 2 delay of *the cells of an integrated circuit*,” (2) an “initial gain value” be associated with “*each*
 3 *cell*” in the “integrated circuit,” and (3) “the initial intended delay value of *each cell*” be
 4 computed based on “the initial gain value.” (Ex. 3 at 22:1-6 (emphasis added).) Because these
 5 requirements must be met, Claim 49 requires an operative method for (among other things)
 6 associating the target delay of *each cell in an integrated circuit* based on the initial gain value.⁵

7 Unlike the theory of logical effort as applied to constant delay supplied by Kudva, the
 8 purported Grodstein, Mead, and Glasser “embodiments” could not supply the operative methods
 9 required by the claims. Integrated circuits contain many kinds of cells, not just inverters. Mead
 10 related only to a chain of inverters rather than to arbitrary cells and, therefore, did not supply the
 11 methods required by claim 49. (FF ¶ 125.) Grodstein’s Power x Delay is not a gain-based
 12 method for setting the target delay, which claim 49 plainly requires. (Tr. 1170:16-1172:7
 13 (Sarrafzadeh); Tr. 1112:8-1113:25 (Friedman).) Furthermore, Power x Delay did not teach an
 14 “operative,” automated method for modeling the delay of the cells of an integrated circuit because
 15 it would lead to a gain of one for an inverter, a result that the Driving Paper acknowledges makes
 16 no sense. (FF ¶ 105; Ex. 1195 at SY012226.) And Glasser cannot supply the necessary methods,
 17 because obtaining an equation where delay is based on gain requires a mathematical derivation of
 18 Glasser’s equivalence 5.2. As Dr. Harris conceded, there is ***no evidence*** van Ginneken ever
 19 performed this derivation. (Tr. 638:22-639:4 (Harris).)⁶ Kudva’s contributions supplied the
 20 operative methods necessary for the conception of claim 49 and the other claims.

21
 22
 23 ⁵ The methods claimed by the remaining claims of the ‘446 and ‘438 Patents also must work in
 24 an automated system for designing integrated circuits using arbitrary cells. (Magma Br. 12:28-
 13:13.)

25 ⁶ Synopsys contends that van Ginneken also solely conceived of the “fourth embodiment” of
 26 claim 49, based on Sutherland’s continuous buffering assumption. (Synopsys Br. 20:18-21.)
 27 Synopsys is wrong. Even according to Synopsys’s own expert, in order to arrive at this
 28 “embodiment,” one must use gain-based teachings of the Sutherland paper in order to calculate an
 initial intended delay. (Tr. 503:24-505:1 (Harris).) This is the connection that van Ginneken and
 Kudva testified was contributed by Kudva. (See, e.g., van Ginneken Dep. Tr. 46:7-15; Kudva
 Dep. Tr. 38:4-25; see also FF ¶¶ 97-109.)

2. The Evidence of Kudva's Contributions To Conception Is Clear and Convincing.

Synopsys's assertion that Magma "*did not present any evidence*" to rebut the testimony of Damiano, Rudell, and Shenoy that van Ginneken had solely conceived of the "constant delay inventions" before collaborating with Kudva is false. (Synopsys Br. 18:25-20:15 (emphasis in original).) Indeed, there is substantial evidence that refutes Synopsys's position:

- Damiano admitted that as of the end of January 1996, van Ginneken did not discuss anything other than Grodstein's concept of constant delay. (Ex. 1123; Tr. 830:21-831:5.) Damiano admitted that van Ginneken did not use the word "gain" or mention the concept of ideal buffering during the February 28, 1996 NGSS meeting. (Tr. 835:25-836:19, 836:22-24.) Damiano admitted that he did not recall a discussion of constant delay at the March 6, 1996 NGSS presentation. (Tr. 841:12-17.)
- Rudell admitted that he did not know when a presentation in which van Ginneken allegedly discussed gain-based synthesis occurred. (Tr. 887:6-889:17.)
- Shenoy admitted that the curved line in his notes of the February 28, 1996 meeting reflect Grodstein's Power x Delay model rather than the straight line that would result from a gain-based delay model. (Tr. 937:22-938:7, 976:4-977:4; FF ¶¶ 77-78.) Shenoy admitted that it was not until after May 30, 1996 that he became familiar with constant delay. (Tr. 967:2-968:22.)
- Van Ginneken admitted that "[i]n early March 1996, I made a presentation to IBM and Synopsys engineers on concepts relating to the constant delay paradigm. *At the time, I had not conceived of an effective method to select and optimize the delays of arbitrary cells.* As a result, I incorporated into my slide presentation a discussion of 'Power' delay, or efficiency, a concept discussed in Grodstein." (Ex. 1661 ¶ 4 (emphasis added).)

Synopsys's assertion that "[e]very piece of documentation from 1996 indicates that van Ginneken was the sole inventor of the patented inventions" also is flawed. (Synopsys Br. 20:23-24.) Even the evidence that Synopsys cites affirmatively establishes that van Ginneken had not conceived of the methods required by the claims before collaborating with Kudva:

- Van Ginneken's e-mail notes of the January 30-31, 1996 meeting state, "LVG/RR: Discussion on constant delay model." (Ex. 1123 at SY013051.) This indicates, at most, that van Ginneken was aware of the bare concept of constant delay invented by Grodstein. (FF ¶¶ 69-72; Magma Br. 19:5-8.)
- Shenoy's notes of the February 28, 1996 NGSS meeting reflect Grodstein's Power x Delay model rather than a gain-based delay model. (Tr. 566:2-567:19 (Harris), 937:22-938:7, 976:4-977:4 (Shenoy); Ex. 128 at SY008567; FF ¶¶ 77-78; Magma Br. 19:9-20:2.)
- Van Ginneken's invention disclosure form dated April 25, 1996, with an alleged invention date of February 29, 1996, described a "philosophy" rather than an

actual invention. (Ex. 1152.) The disclosure identifies research possibilities and asserts that “many applications” of constant delay could potentially be patented. (*Id.*) The disclosure does not mention (a) gain, (b) gain-based synthesis, (c) initial intended delay, or (d) relative delay value. (Tr. 606:16-21, 608:17-21 (Harris); FF ¶¶ 80-85; Magma Br. 13:19-14:21.)

- Van Ginneken’s March 6, 1996 presentation merely reiterated Grodstein’s Power x Delay method for setting delays as well as prior art equations from Glasser that Grodstein had cited. (Ex. 1155 at IBM001573, 1578; Magma Br. 20:3-17.)

Synopsys’s reliance on the draft patent applications as evidence of van Ginneken’s purported sole conception of the inventions also is misplaced. (Synopsys Br. 21:4-6.) The draft patent applications were not prepared until after van Ginneken began collaborating with Kudva. (FF ¶¶ 135, 136.) Synopsys decided not to file the applications precisely because Synopsys was concerned that IBM would jointly own any resulting patents due to Kudva’s contributions. (Van Ginneken Dep. Tr. 76:5-12.)

Synopsys virtually ignores the White Paper. (Synopsys Br. 21:7-12.) Synopsys argues only that “[t]he evidence did not demonstrate [] that Kudva conceived of any of the ideas or inventions contained in this paper.” (*Id.* 21:8-9.) But the evidence that Kudva made substantial contributions to the ideas, inventions, drafting, experimentation, and code writing relating to the White Paper is robust. (Magma Br. 15:6-17:3; FF ¶¶ 103-121.)

Finally, Synopsys asserts that Kudva merely contributed a “public domain paper” and, as such, cannot qualify as a joint inventor. (Synopsys Br. 23:1-8.) Synopsys is wrong. Kudva did far more than merely contribute a paper. He contributed an inventive application of the theory of logical effort to the setting of target delays, and participated in the drafting, experimentation, and code writing for the White Paper. (FF ¶¶ 99, 103-121; Magma Br. 12:22-17:3.)

And even if all that Kudva did was contribute the theory of logical effort, he is still an inventor. “The genius of invention is often a combination of known elements which in hindsight seems preordained.” *McGinley v. Franklin Sports, Inc.*, 262 F.3d 1339, 1351 (Fed. Cir. 2001). Synopsys’s argument that Kudva “did not suggest *any* concepts relating to gain to van Ginneken *other than concepts that already appeared in the Sutherland paper*” misses the point. (Synopsys Br. 23:5-6 (emphasis in original).) Kudva did not need to suggest *additional* “concepts relating to gain” in order to be an inventor. As the Driving Paper acknowledged, it was

1 Sutherland's theory of logical effort that was used to "motivate the constant delay model for logic
2 synthesis, and to determine appropriate constant delays for library cells." (Ex. 1195 at
3 SY012221.)

4 **III. THE INVENTIONS WERE JOINTLY REDUCED TO PRACTICE.**

5 In a further effort to obscure the evidence of IBM's ownership interest in the '446, '438,
6 and '114 Patents, Synopsys uses a standard for reduction to practice that is substantially higher
7 than that imposed by law. (Synopsys Br. 23:24-24:2, 31:25-32:3.) Synopsys incorrectly applies
8 this standard to argue that the inventions were not reduced to practice. (*Id.* 24:5-33:1.) But under
9 the correct standard for reduction to practice, the Patents' inventions were jointly first reduced to
10 practice during the term and in the performance of the JDA. (*See* Magma Br. at Section III.)

11 **A. Synopsys Proposes An Incorrect And Overly Burdensome Standard For 12 Reduction To Practice.**

13 Synopsys proposes a five-part test for reduction to practice that combines excerpts from
14 four different cases, none of which articulates Synopsys's purported "test." (Synopsys Br. 23:24-
15 24:2, 31:25-32:3.) Rather than supporting Synopsys's proposed test, these cases actually confirm
16 that the test has two parts, not five: "In order to establish actual reduction to practice, the
17 inventor must prove [1] that he constructed an embodiment or performed a process that met all
18 the limitations of the claim, and [2] that he determined that the invention would work for its
19 intended purpose." *Slip Track*, 304 F.3d at 1265; *see also* *Estee Lauder Inc. v. L'Oreal, S.A.*, 129
20 F.3d 588, 592 (Fed. Cir. 1997); *Scott v. Finney*, 34 F.3d 1058, 1061 (Fed. Cir. 1994); *Newkirk v.*
21 *Lulejian*, 825 F.2d 1581, 1582 (Fed. Cir. 1987).

22 Synopsys's attempt to add three requirements to the well-established two-part reduction to
23 practice test is wrong as a matter of law. First, sufficient testing under "proper conditions" is not
24 a separate requirement for reduction to practice. (Synopsys Br. 23:25-26, 24:21-25:2.) The
25 single case cited by Synopsys on this point mentions "testing conditions" as support for the
26 proposition that the embodiment relied upon to demonstrate reduction to practice must "actually
27 work[] for its intended purpose." *Newkirk*, 825 F.2d at 1582. The Patents do not require (nor has
28 Synopsys demonstrated) that the claimed inventions must be capable of operating in any

1 particular environment. (*See* Exs. 1, 3, 5.)

2 Second, testing that demonstrates “utility beyond a probability of failure” is not a separate
3 requirement for reduction to practice. In *Scott*, the court analyzed the second part of the two-part
4 test for reduction to practice, stating, “When testing is necessary to show proof of actual reduction
5 to practice, the embodiment relied upon as evidence of priority *must actually work for its*
6 *intended purpose.*” *Scott*, 34 F.3d 1058, 1061 (Fed. Cir. 1994) (emphasis added). To explain this
7 requirement, the court outlined principles set forth by its predecessor, the CCPA. *Id.* at 1062.
8 For example, “[t]esting need not show utility beyond a possibility of failure, but only utility
9 beyond a probability of failure.” *Id.* (citing *Taylor v. Swingle*, 136 F.2d 914, 917 (C.C.P.A.
10 1943)).

11 Finally, the inventor’s subjective satisfaction with the quality of the test results is not
12 required for reduction to practice. (Synopsis Br. 31:25-32:3.) The Federal Circuit’s predecessor
13 established that “[the inventor’s] standards of success are irrelevant to the issue of reduction to
14 practice.” *Mattor v. Coolegem*, 530 F.2d 1391, 1395 (C.C.P.A. 1976). The cases cited by
15 Synopsis do not support its argument that an inventor’s subjective disappointment or satisfaction
16 with test results is relevant to the reduction to practice inquiry. *Estee Lauder*, 129 F.3d at 594-95;
17 *Cooper v. Goldfarb*, 154 F.3d 1321, 1327-30 (Fed. Cir. 1998); *Union Carbide Chems. & Plastics*
18 *Tech. Corp. v. Shell Oil Co.*, 308 F.3d 1167, 1189-90 (Fed. Cir. 2002).

19 **B. The Inventions Were Jointly Reduced To Practice.**

20 When the proper legal standard is applied, Magma has met both requirements for
21 reduction to practice: (1) IBM and Synopsis jointly created Synzilla, which practiced the claims
22 of the Patents, and (2) testing of Synzilla demonstrated that the inventions would work for their
23 intended purposes. (Magma Br. 26:3-31:5.)

24 **1. Synzilla Practiced The Claims Of The Patents.**

25 Robert Damiano, Synopsis’s 30(b)(6) designee, admitted that Synzilla practiced the
26 claims of the Patents. (FF ¶¶ 198, 204.) At trial, he explained his admission:

27 Practiced means you use a particular claim. That was the translation that I made.
28 So we are using some of the claims that Lukas has in his patent, and it’s true, we
coded some of those claims.

(Tr. 792:4-9.) Damiano’s admission satisfies the first part of the Federal Circuit’s two-part test for reduction to practice. *Slip Track*, 304 F.3d at 1265. Synopsys does not challenge Damiano’s admission. Instead, Synopsys argues that “[t]he question is not whether Synzilla was able to ‘practice’ the patent claims, but rather whether Synzilla reduced to practice the patent claims” (Synopsys Br. 26:7-9 (emphasis omitted).) But this argument addresses the second element of reduction to practice, namely, that the inventions work for their intended purposes. *See Slip Track*, 304 F.3d at 1265.

Given Damiano’s admission, Magma was not required to provide expert testimony that Synzilla practiced the claims of the Patents. The one case cited by Synopsys for the proposition that a party asserting reduction to practice must provide expert testimony that the embodiment relied upon practiced the claims of the patents explicitly states, “We do not state a per se rule that expert testimony is required to prove infringement [or, in this case, reduction to practice]” *See Centricut, LLC v. Esab Group, Inc.*, 390 F.3d 1361, 1370 (Fed. Cir. 2004). Furthermore, the admission of Synopsys’s 30(b)(6) designee that Synzilla practiced the claims of the Patents obviates the need for expert testimony on the subject. Regardless, Damiano *is* an expert on Synzilla – in fact, he was Synopsys’s chosen expert on the topic of “any and all joint projects developed pursuant to the JDA, including, without limitation . . . Synzilla” (Tr. 812:12-18.) Synopsys cannot now object to Damiano’s testimony regarding Synzilla on the basis that he is not qualified.

Unable to explain away Damiano’s testimony, Synopsys seeks to identify claim elements not present in Synzilla in an effort to show that there was no reduction to practice of the inventions. (Synopsys Br. 25:9-24.) The only purported claim element cited by Synopsys as not present in the version of Synzilla tested in July 1997 is placement. (*Id.* 25:11-13.) But Claim 49 of the ‘446 Patent **does not require placement**. (Ex. 3 at 22:1-7.) Furthermore, **simulated placement** is sufficient to reduce to practice the inventions described in claims 1 of the ‘446 and ‘438 Patents and all of the claims of the ‘114 Patent. (Magma Br. 29:1-20.) Thus, Synzilla’s ability to perform placement has no bearing upon the reduction to practice of these claims. In any event, even if placement were required, Synopsys admits that Synzilla implemented actual

1 placement during the Intel demonstrations. (FF ¶ 194; Synopsys Br. 25:13-15.)⁷

2 **2. The Inventions Worked For Their Intended Purposes.**

3 The Court need look no further than the claims to determine the inventions' intended
4 purposes. *See Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1118
5 (Fed. Cir. 2004) (the intended purpose of a claimed invention is governed by the claim's language
6 and preamble); *Manning v. Paradis*, 296 F.3d 1098, 1102 (Fed. Cir. 2002); *Griffin v. Bertina*, 285
7 F.3d 1029 (Fed. Cir. 2002). The intended purpose of the inventions in claim 1 of the '446 and
8 '438 Patents is to "design[] an initial integrated circuit layout." The intended purpose disclosed
9 in claim 49 of the '446 Patent is to "model[] the delay of the cells." The intended purpose
10 disclosed in all of the claims of the '114 Patent is to "plac[e] cells in a placement area." (Ex. 3 at
11 17:14-15, 22:1-2; Ex. 1 at 17:8-9; Ex. 5 at 6:56-57, 7:13-14, 8:5-6.) As set forth in Magma's
12 Post-Trial Brief, the Synzilla tests demonstrate that the claimed inventions worked for their
13 intended purposes. (Magma Br. at Section III.)

14 Synopsys's assertion that "[t]he intended purpose of all the patented inventions is to
15 ensure timing closure throughout placement and routing" is wrong. (Synopsys Br. 28:3-4.) The
16 claims' language and preamble do not require timing closure and, as such, timing closure cannot
17 be the intended purpose of the inventions. Instead of looking to the claim language, as is
18 required, Synopsys improperly relies upon prior art, the Patents' specifications, the Notice of
19 Allowance issued by the PTO, Magma's arguments before the PTO, the White Paper, and van
20 Ginneken's draft patent applications, none of which is relevant to the Court's inquiry. (Synopsys
21 Br. 28:3-20.) Whether the parties in fact were attempting to develop a system that would ensure
22 timing closure has no bearing on the reduction to practice analysis. *See Mattor*, 530 F.2d at 1395
23 (reduction to practice required that claim limitations, not inventor's aspirations, be met).

24
25
26 ⁷ Synopsys also suggests that, during the Intel demonstrations, Synzilla's gain-based synthesis
27 option may have been disabled. (Synopsys Br. 25:19-24.) As discussed in Magma's Post-Trial
28 Brief, this cannot be the case. (Magma Br. 30:21-31:5.) Gain-based synthesis was Synzilla's
default setting. *Id.* Had this option been "turned off," the change would have been apparent from
the test results. *Id.*

C. The Inventions Were Jointly Reduced To Practice After Van Ginneken Left Synopsys.

Synopsys's assertion that the inventions were not jointly reduced to practice after van Ginneken left Synopsys is wrong. (Synopsys Br. 24:10-20.) The Synzilla code revision history conclusively demonstrates that the Synzilla code was significantly revised after van Ginneken left Synopsys in May 1997. (See Magma Br. 26:10-16; FF ¶¶ 180-182; Ex. 1659-2) After the July 1997 NGSS joint alliance meeting, the code was further revised in preparation for the Intel demonstrations. Code essential to the operation of the inventions was added after May 1997. For example, the "Topotree" module was not completed until October 6, 1997, and the "sizer" and "libanal" modules were not completed until October 20, 1997. (Ex. 1659-2 at 38, 42.)⁸

D. The Inventions Claimed In The '114 Patent Were Jointly Reduced To Practice.

Synopsys's claim that Magma has "ignored the '114 Patent" is false. (Synopsys Br. 38:14-39:15.) Magma presented ample evidence demonstrating that the inventions claimed in the '114 Patent were jointly reduced to practice by IBM and Synopsys. Tony Drumm, an IBM engineer, wrote code for the rough placer used in Synzilla – the portion of Synzilla that practiced the claims of the '114 Patent. (Tr. 971:20-972:9, 980:10-14, 981:4-983:16.) Shenoy testified that he "worked with Tony Drumm to define the interfaces for the Steiner tree calculator or the net length estimations he was going to put in," and that Drumm's code was "invoked in connection with [the] rough placer." (Tr. 971:20-972:9.) Drumm's Steiner tree and net length estimation code was essential to the implementation of Synzilla's rough placer. (Tr. 1251:4-17; Drumm Dep. Tr. 137:11-13, 139:15-140:1, 142:5-16.)

⁸ Synopsys's suggestion that IBM was somehow required to be present during the Intel tests for the reduction to practice to be joint is incorrect. (Synopsys Br. 24:17-19, 32:13-33:1.) Synzilla could not have implemented the inventions claimed in the Patents without using code contributed by IBM engineers. (Magma Br. 33:4-16.)

1 **IV. MAGMA SHOULD NOT BE ESTOPPED FROM RAISING IBM'S OWNERSHIP**
 2 **OF THE PATENTS.**

3 **A. *Richardson* Is Inapplicable.**

4 Despite the Court's rulings that the only estoppel doctrine left in the case is judicial
 5 estoppel, Synopsys relies on *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226 (Fed. Cir. 1989) in
 6 an attempt to create another type of estoppel to deprive Magma of its third-party ownership
 7 defenses to infringement. (Synopsys Br. 9:19-10:26.) *Richardson* does not support, and the
 8 Court already has rejected, Synopsys's argument. In its summary judgment motion raising
 9 estoppel by contract, Synopsys cited to *Richardson* to argue that equity estopped Magma from
 10 asserting IBM's joint ownership of the Patents. (See Docket No. 353 at 2:11-13; 21:25-25:19.)
 11 The Court denied Synopsys's motion, explaining that Magma was not barred from asserting
 12 IBM's ownership interest:

13 Even if Magma were estopped by the terms of van Ginneken's contract, ***Magma***
 14 ***would not be prevented from arguing that IBM and Synopsys are co-owners of***
 15 ***the disputed patents.*** Synopsys's Proprietary Information and Inventions
 16 Agreement only applies to van Ginneken's interests. In arguing that IBM co-owns
 17 the disputed patents with Synopsys, Magma does not dispute that Synopsys is the
 18 sole owner of van Ginneken's interests in the inventions. ***Rather, Magma argues***
 19 ***that IBM also possesses an interest in the inventions, independent of van***
 20 ***Ginneken's interest and contractual agreements with Synopsys.***

21 *Synopsys, Inc. v. Magma Design Automation, Inc.*, No. C-04-3923 MMC, 2006 WL 825277, at *3
 22 (N.D. Cal. Mar. 30, 2006) (emphasis added). The Court confirmed at trial that all of Synopsys's
 23 estoppel arguments, except judicial estoppel, have been rejected. (Tr. 1339:4-7.)

24 Despite the Court's previous rejection of the argument, Synopsys continues to insist that
 25 *Richardson* estops Magma from raising IBM's ownership as part of its license defense.
 26 *Richardson* remains wholly inapposite. The holding and reasoning in *Richardson* do not apply to
 27 a defendant's assertion of a license defense based on a third party's co-ownership of the patent in
 28 issue. And Synopsys does not cite to a single case where a party was estopped from defending
 against an infringement claim based on a license to patents co-owned by a third party.

In *Richardson*, the jury found that the defendant, Suzuki, had obtained the '393 patent
 through fraud and misappropriation of trade secrets. *Richardson*, 868 F.2d at 1244-45, 1247.

1 Based on the verdict, the plaintiff sought and obtained a post-trial remedy reassigning ownership
 2 of the '393 patent from Suzuki to the plaintiff. *Id.* at 1249-50. Suzuki argued that reassignment
 3 was unwarranted because (1) there was a third-party inventor, Cazort, of the '393 patent, and (2)
 4 Suzuki personnel had made "modifications in one or two claims" of the '393 patent. *Id.* at 1249.
 5 The court held that allowing Suzuki to maintain ownership of the '393 patent because of its
 6 "modification in one or two claims" would "ratify and indeed reward the wrongdoing." *Id.* The
 7 court also held that Cazort's status as an inventor was not before the court and did not affect the
 8 post-trial assignment remedy. *Id.*

9 Synopsys's attempt to invoke *Richardson* to preclude Magma from asserting a license
 10 defense based on IBM's ownership is therefore misplaced. *Richardson* imposed the post-trial
 11 assignment remedy in order to prevent the wrongdoer from keeping the '393 patent merely
 12 because it had modified one or two claims of the inventions misappropriated from the plaintiff.
 13 *Richardson*, 868 F.2d at 1249. Here, by contrast, Magma is not attempting to assert *its*
 14 **ownership** of the patents based on its "further modification in one or two claims of the patent."
 15 (Synopsys Br. 10:8-10 (quoting *Richardson*, 868 F.2d at 1249).) Magma withdrew its claim of an
 16 ownership interest in the '446 and '438 Patents based on the contributions to certain claims by
 17 Magma engineers after van Ginneken left Synopsys. (Docket No. 1110 ¶ 1.) Instead, Magma is
 18 relying on the ownership interests of IBM, which Synopsys wrongfully denies.

19 *Richardson* also does not support Synopsys's assertion that the rights of third-party
 20 inventors and owners are "irrelevant." (Synopsys Br. 10:7-8.) *Richardson* did not preclude a
 21 determination on the merits of a third party's ownership interest as the basis of a license defense.
 22 Unlike Magma, Suzuki did not have a license to the patents of the third-party inventor, Cazort,
 23 and was not accused of infringing the misappropriated '393 patent. Thus, Suzuki had no reason
 24 to seek -- and did not seek -- a determination that Cazort was a co-owner. Consequently, no such
 25 determination was made. *See Richardson*, 868 F.2d at 1249-50.⁹ By contrast, Magma is licensed

26
 27 ⁹ In *Richardson*, even if the '393 patent's inventorship had been corrected, that would not have
 28 affected Suzuki's position because it was not being sued for infringing, and was not licensed to,
 Cazort's patents.

1 to patents owned by IBM and is seeking a determination that IBM is a joint owner.

2 Nor can Synopsys establish the basis for the post-trial assignment remedy granted in
3 *Richardson*. As Magma's pending motion for summary judgment demonstrates, Synopsys's
4 fraud and other state-law claims, all of which are based on alleged misappropriation of
5 confidential information, are time-barred. See *Rodgard Corp. v. Miner Enterprises, Inc.*, No. 84-
6 CV-397E, 1992 WL 119129, at *1 (W.D.N.Y. May 22, 1992) ("The Court's remedy [in
7 *Richardson*] of directing the assignment of the patents was premised on the jury's finding of
8 fraud by the defendant").

9 Contrary to Synopsys's assertion, *Richardson* does not estop Magma from raising IBM's
10 ownership simply because Magma, rather than Synopsys, drafted the claims of the '446 and '438
11 patents and filed the applications. IBM's contributions are fundamental to the conception of the
12 "complete and operative invention, as it [was] hereafter to be applied in practice." *Ethicon*, 135
13 F.3d at 1460. Thus, no valid claims could have been drafted that would have excluded IBM's
14 ownership interest. Magma would be entitled to a license defense regardless of who drafted the
15 claims or filed the applications.

16 Finally, Synopsys's assertion that the cases cited in *Richardson* support the proposition
17 that courts are required to ignore the rights of joint owners and joint inventors and reassign a
18 patent solely to the plaintiff is incorrect. Those cases do not address the rights of any third party
19 as a joint inventor or joint owner at all, let alone in the context of license defense to infringement.
20 See *Becher v. Contoure Labs., Inc.*, 279 U.S. 388 (1929); *Saco-Lowell Shops v. Reynolds*, 141
21 F.2d 587 (4th Cir. 1944); *DeLong Corp. v. Lucas*, 176 F. Supp. 104 (S.D.N.Y. 1959); see also
22 *Hayhurst v. Rosen*, 1992 WL 123178 (E.D.N.Y. May 18, 1992). Similarly, *Cargill, Inc. v. Sears*
23 *Petroleum & Transp. Corp.*, 2004 WL 3507329, at *13-14 (N.D.N.Y. Aug. 27, 2004), does not
24 provide any basis to estop Magma from defending against an infringement claim based on a
25 license from a third party. (See Synopsys FFCL ¶¶ 150-51.) As in *Richardson*, the defendant in
26 *Cargill* did not raise a third-party ownership defense to infringement. Neither *Cargill* nor any
27 other case cited by Synopsys supports converting the post-judgment remedy imposed by
28 *Richardson* into an estoppel doctrine that would prevent a defendant from raising the ownership

rights of a third party as the basis for a license defense.

B. Equity Also Precludes Synopsys From Invoking Judicial Estoppel.

Synopsys's assertion that the Court apply the "extraordinary remedy" of judicial estoppel and not reach the merits of the ownership issues presented at trial violates the principle that equity must "avoid doing inequity." *See An-Tze Cheng*, 308 B.R. at 460; *Klein v. Stahl GMBH & Co. Maschinefabrik*, 185 F.3d 98, 109 (3d Cir. 1999). Synopsys cannot meet any of the requirements for the application of judicial estoppel.

1. The Application Of Judicial Estoppel Is Neither Necessary Nor Equitable.

Judicial estoppel is an "extraordinary remedy" that is merely "one arrow in the quiver of sanctions at a court's disposal." *Klein*, 185 F.3d at 109. Because it precludes the resolution of a claim on the merits, judicial estoppel should only be applied by the court "when absolutely necessary." *Id.* Thus, equity limits the application of judicial estoppel to rare cases where "a party's inconsistent behavior will otherwise result in a miscarriage of justice" and the estoppel remedies "the damage done by a litigant's malfeasance" by "address[ing] the harm identified." *Id.* at 108 (citations omitted); *see also Russell v. Rolfs*, 893 F.2d 1033, 1037 (9th Cir. 1990). Judicial estoppel is an unnecessary and inequitable sanction in this case for at least three reasons.

First, this Court has available and has employed remedies other than judicial estoppel to protect Synopsys's ownership interest in the Patents. The Court has enjoined Magma from "taking any steps to destroy, abandon, suspend, limit, disclaim, or seek reexamination of the '446 or '438 patents, or any part thereof, pending resolution of the issue of ownership." (Docket No. 771 at 8:17-20.) If the Court recognizes IBM's ownership of the patents, Magma will not obtain any permanent advantage with respect to Synopsys as a result of Magma's representations to the PTO. Synopsys will be a co-owner of the Patents and will have the opportunity to correct inventorship with the PTO even if IBM is adjudicated a co-owner.

Second, the imposition of judicial estoppel would violate the principle that equity should "avoid doing inequity" because it would result in a "transfer of a windfall." *An-Tze Cheng*, 308 B.R. at 460 (emphasis added). Synopsys seeks to use judicial estoppel against Magma to obtain

1 sole ownership of Patents that the evidence shows that IBM owns under patent law and under the
 2 JDA. Thus, judicial estoppel would exacerbate rather than remedy the alleged harm by allowing
 3 Synopsys to obtain sole ownership of patents that it does not exclusively own and to which
 4 Magma would otherwise have a license. *Id.*

5 Third, equity will not preclude Magma from asserting IBM's ownership because
 6 Synopsys comes to the Court with unclean hands. (Magma Br. at Section IV.D.) *See Adler v.*
 7 *Fed. Republic of Nig.*, 219 F.3d 869, 876-77 (9th Cir. 2000). Since the inception of the JDA and
 8 throughout this litigation, Synopsys has sought to deprive IBM of its ownership interest in the
 9 Patents:

- 10 • Synopsys directed van Ginneken not to disclose the draft patent applications to
 11 IBM because it believed that "regardless whether he [Kudva] was an inventor or
 12 not, even if he was not, the patent would still be jointly owned by—because of the
 joint development agreement that Synopsys and IBM entered into." (Van
 Ginneken Dep. Tr. 76:4-12.)
- 13 • Synopsys claimed it was the sole owner of the Patents when it filed continuation
 applications in 2005 and did not inform the PTO of IBM's ownership interest.
- 14 • Synopsys licensed Synzilla to Intel for \$2 million in December of 1996 for use in
 15 Intel's Pentium IV microprocessor. This triggered the on-sale bar of 35 U.S.C.
 § 102(b) and rendered the Patents invalid.
- 16 • Synopsys refused, until compelled by the Court, to comply with Magma's
 17 discovery requests seeking information relating to the JDA and IBM's ownership.
 Synopsys went so far as to threaten Magma with Rule 11 sanctions for pursuing its
 18 defenses and counterclaims based on IBM's ownership interest in the Patents.

19 On this record, Synopsys cannot invoke principles of equity to estop Magma.

20 **2. Synopsys Cannot Show That It Has Suffered Any Harm Sufficient To** 21 **Warrant The Application of Judicial Estoppel.**

22 Synopsys has failed to show that it has suffered any detriment as the result of the allegedly
 23 inconsistent positions taken before the PTO and the Court. Judicial estoppel only applies if the
 24 failure to estop Magma from raising IBM's ownership rights would "impose an unfair detriment"
 25 on Synopsys. (Synopsys FFCL ¶ 158 (citing *Hamilton v. State Farm Fire & Cas. Co.*, 270 F.3d
 26 778, 782-83 (9th Cir. 2001)). Synopsys cannot articulate any reason why permitting Magma to
 27 raise IBM's ownership rights in this Court would impose an "unfair detriment" on Synopsys.

28 Synopsys's assertion that allowing Magma to raise an IBM license defense to

1 infringement amounts to an unfair detriment to Synopsys is baseless. (Synopsys Br. 35:24-26.)
 2 IBM's ownership of the Patents (and its right to license them) arises from patent law and the
 3 JDA, not from any misrepresentations to the PTO. Magma would have the opportunity to assert
 4 its license as a defense to infringement irrespective of its patent-prosecution activities. *See*
 5 *McCoy v. Mitsuboshi Cutlery, Inc.*, 67 F.3d 917, 920-21 (Fed. Cir. 1995) (a license is an
 6 affirmative defense to patent infringement). There is no connection between the purportedly
 7 inconsistent positions Magma has taken and IBM's grant of a license to Magma. Synopsys,
 8 therefore, cannot show an unfair detriment to it.

9 **3. Neither Magma Nor van Ginneken Made Knowing Misrepresentations** 10 **To The PTO.**

11 Synopsys has failed to show that Magma or van Ginneken intended to mislead the PTO.
 12 Judicial estoppel does not apply where an alleged misrepresentation is based on inadvertence or
 13 mistake. (SJ Order at 9:3-5; *see Johnson v. Oregon*, 141 F.3d 1361, 1369-70 (9th Cir. 1998) ("If
 14 incompatible positions are not based on chicanery, but only on inadvertence or mistake, judicial
 15 estoppel does not apply."); *see also In re Corey*, 892 F.2d 829, 836 (9th Cir. 1989).

16 Magma's representations to the PTO were based on van Ginneken's misunderstanding of
 17 the standards of inventorship. Synopsys's assertion that van Ginneken knew "all the facts
 18 pertaining to the conception of the claimed invention at the time" that he made his initial
 19 representations to the PTO is false. (Synopsys Br. 37:15-22.) Van Ginneken was aware that he
 20 and Kudva had collaborated on research on constant delay, but he was not "sufficiently informed
 21 of what the standards for inventorship were" to ascertain whether Kudva's was a co-inventor
 22 under the law. (Van Ginneken Dep. Tr. 49:17-50:18.) Furthermore, as van Ginneken testified,
 23 Magma had no independent basis to conclude that van Ginneken's representations to the PTO that
 24 he was the sole inventor of the inventions claimed in the Patents were inaccurate. (Van Ginneken
 25 Dep. Tr. 28:12-29:15.)

26 Synopsys's contention that the testimony of Magma's patent counsel shows that van
 27 Ginneken was familiar with and had extensive discussions regarding inventorship and conception
 28 with Magma's patent counsel is baseless. (Synopsys Br. 37:15-22.) Magma's patent counsel

1 testified he had no basis to believe that either van Ginneken or Magma formed an intent to
 2 deceive the PTO in connection with the prosecution of the '446 Patent. (de Guzman Dep. Tr.
 3 70:1-4; 71:18-72:16; 254:9-255:3.) Synopsys's additional assertion that Magma was informed by
 4 an expert consultant that van Ginneken's work could be traced back to Synopsys and IBM is also
 5 unavailing. (Synopsys Br. 37:23-27.) Synopsys has presented no evidence that this consultant
 6 ever communicated to Magma verbally or in writing that IBM or Synopsys had any involvement
 7 with the inventions claimed in the Patents.

8 CONCLUSION

9 Magma respectfully requests that the Court enter judgment in Magma's favor on Magma's
 10 Second, Sixth and Tenth Counterclaims and Magma's Second, Fifth, Seventh, Eighth and
 11 Fifteenth Affirmative Defenses. Magma further requests that the Court determine that Synopsys
 12 is not the sole and exclusive owner of the '446, '438 and '114 Patents, and all foreign
 13 counterparts and continuations thereof, and that IBM is a joint owner of the '446, '438 and '114
 14 Patents, and all foreign counterparts and continuations thereof.

15 Dated: June 30, 2006

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 18 George A. Riley

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